

Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Item ID: D350-591-312

Accept

Revision ID:

N9000040100

Setup Start

NS1

Item Name: Hell-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Stop *NS2*

Start Date: 7/20/2017 Start Qty: 10.00

Cust Item ID:

Required Date: 8/1/2017 Req'd Qty: 10.00

Customer:

Reference:

Approvals: Process Plan: 21

Date: Jul 12 2017 Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D3272	Rev B								

100	Document Control	0.00							
1000	DOCUMENT CONTROL								
DC	Memo	0.00							

Doc. Control*USB or Paperwork Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

AUG 18 2017

110 Weld per dwg A/R Aluminum rod Batch: 0.00

1100

Large Fab

Memo

4.00

Large Fab 1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT10115, weld Fwd End Plate as per QSI 004 & Dwg D3272
A/R Aluminum Rod

3-Grind End Plate flush

B# 164051

DQA:

Date: _____

QA Closed:

Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order: _____		AGAINST DEPARTMENT/PROCESS		Engineering	
Part No. _____		Water Jet		Quality	
NCR No. _____		Rec/Store/Packaging		Other	
Date: _____		Supplier		MIRB (QS1042) Approval	
Step #: _____		QTY Effective: _____			
Description Work Order Deviation		Disposition			
Completed By		Lead hand / Supervisor Approval Verification		QC / QA Coordinator Approval	
Root Cause Environment _____ Design _____ Doc/Data _____ Equip/Tooling _____ Handling/Pre _____ Material _____ Internal Transport _____ Tribal Knowledge _____ LOA _____ Substation _____ Past Expiry Date _____ Misidentified _____		FAULT CATEGORY Temperature/Cure _____ Set-up _____ BOM/Route _____ Broken/Damage/Defect _____ Inspection Incomplete/Unqualified _____ Contamination _____ Countersink _____ Cut Too Short _____ Instructions Incomplete/Unclear _____ Drill Holes _____		Power Loss/Surge _____ Folio/Program _____ Grain _____ Weld _____ Wrong Stock Pulled _____ Out of Sequence _____ Off-set _____ Mislabeled _____ Fit/Function _____ Misaligned/off center _____	
No Re-verification _____ Operator _____ Offset/Setup _____ Supplier _____ Training _____ Use for Testing _____ Poor Information _____ Rushing _____ Product Improvement _____ Process Improvement _____ Manufacturing Process _____ Past Due _____		Pressure/Forced _____ Bending _____ Centre Not Concentric _____ Cracks _____ Crimp/Kink/Ripple/Wave _____ Cuffs _____ Crushing _____ Heat Treat _____ Wave/Twist in Tube _____ Marks/Chatter _____		Positioned Wrong _____ Outside Dimensions _____ Over/Under tolerance _____ Part Incorrect _____ Part Lost/Missing _____ Part Moved _____ Drawing _____ Finish _____ Misread _____ Turning Sequence _____	
OTHER: _____					

Work Order ID 164051

164051

Wednesday, July 12, 2017 1:43:24 PM

Item ID: D350-591-312

Accept

Revision ID:

Item Name: Helix-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 7/20/2017

Start Qty: 10.00

10

Required Date: 8/1/2017

Req'd Qty: 10.00

10

Reference:

N9000040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC9- Inspect visual per QSI004- Fusion Welds

0.00

120

Memo

0.00

QC

Quality Control

10 11.01.17

DAS 9 9-89

130

QC5- Inspect part completeness to step on W/O

0.00

130

Memo

0.20

QC

Quality Control

10 11.01.17

DAS 9 9-89

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

Memo

4.10

QC

Quality Control

10 11.01.17

DAS 9 9-89

DQA:

Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Engineering																																																																																																																																													
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Date: _____		Use-as-is		Thermoforming		Rec/Store/Packaging																																																																																																																																															
Step #: _____		Suspected Unapproved		Large Fab		Supplier																																																																																																																																															
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Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Page 3

Item ID: D350-591-312

Accept

Revision ID:

Item Name: Heil-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

N9000040100

Setup Start

NS1

Stop *NS2*

Start Date: 7/20/2017

Start Qty: 10.00

10

Cust Item ID:

Required Date: 8/1/2017

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC7-Inspect Chemical Conversion Coat

0.00

10

150

Memo

0.10

Quality Control

AUG 03 2017

180

180

Weld per dwg A/R Aluminum rod Batch:
Large Fab

0.00

Large Fab

Memo

4.00

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272
A/R Aluminum Rod M136158

6-Grind End Plate flush

7-Install last rivet as per Dwg.

X10 S.L 2017.08.02

DQA:

Date: _____

QA Closed:

Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Engineering	
Part No. _____		Rework		Cross tube		Water Jet		Quality	
NCR No. _____		Scrap		Small Fab		Prod. Eng. Coord.		Other	
Date: _____		Use-as-is		Finishing		Rec/Store/Packaging			
Step #: _____		Suspected Unapproved		Large Fab		Supplier			
QTY Effective: _____								MRB (QS1042) Approval	
Description Work Order Deviation		Disposition						Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause		FAULT CATEGORY									
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong						
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions						
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance						
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect						
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing						
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved						
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing						
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish						
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread						
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence						
Past Expiry Date	Manufacturing Process										
Misidentified	Past Due										
OTHER: _____											

Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Item ID: D350-591-312

Accept

Revision ID:

N9000040100

Setup Start

N.S1

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Stop *N.S2*

Start Date: 7/20/2017

Start Qty: 10.00

10

Cust Item ID:

Required Date: 8/1/2017

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number Insp.
Stamp

190 QC *10N* QC10-Inspect visual per QSI004- ground welds 0.00

0.00

10

AUG 03 2017

Quality Control

200 QC *20N* QC5- Inspect part completeness to step on W/O 0.00

0.20

10

AUG 03 2017

Quality Control

210 *21N* Chemical Conversion Coat per QSI005 4.1 0.00

1.00

10

2017-08-03

Hard Finish
Hard Finishing

52C
BEE

Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Item ID: D350-591-312

Accept

Revision ID:

N9000040100

Setup Start

NS1

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Stop

NS2

Start Date: 7/20/2017

Start Qty: 10.00

Cust Item ID:

Required Date: 8/1/2017

Req'd Qty: 10.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

220
Powdercoat

Memo

2.10

Powder Coating

START TIME: 10:00 AM

OVEN TEMPERATURE: 325°C

FINISH TIME: 10:30 AM

Pro →

230 Wing Walk as per dwg QSI005 4.4 Batch

0.00

230
HandFinish

Memo

2.20

Hand Finishing

240 QC3- Inspect Part Finish

0.00

240
QC

Memo

0.10

Quality Control

X1074 4

X10R2 4 22 4/6/16

Ca

AUG 16 2017

mf

DQA:

Date:

18 July 2019

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: <u>164057</u> Part No. <u>D30-591-312</u> NCR No. <u>19-7325</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Thermoforming ☐ Finishing ☒ Rec/Store/Packaging ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date: <u>20/12/14</u> Step #: <u>220</u>		QTY Effective: <u>84</u>		MRB (QSI042) Approval <u>Sy 12/14</u>					
Description Work Order Deviation Found after powder coat that qty 4 steps Found after powder coat that qty 4 steps had been through the wash and 1 new coating had been through the finish and it was lacking powder coat. Process for cleaning steps not effective Re Process for clean steps not effective		Disposition <u>See next page</u>		Completed By <u>12/06/15</u> Lead hand / Supervisor <u>19.07/14</u> Approval Verification QC / QA Coordinator <u>Sy 12/14</u>					
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☒ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		Pressure/Forced Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☒ Misread ☐ Turning Sequence ☐	
OTHER:									

Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Item ID: D350-591-312

Accept

Revision ID:

N9000040100

Setup Start

NS1

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Stop

NS2

Start Date: 7/20/2017

Start Qty: 10.00

10

Cust Item ID:

Required Date: 8/1/2017

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

250

Pick Kit

0.00

250

Packaging

Memo

0.10

Packaging

DAS 6 AUG 17 2017 8:30

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.30

Quality Control

DAS 6 27 2017 9:30

AUG 18 2017

270

Identify as per dwg & Stock Location:

0.00

270

Packaging

Packaging

0.00

Packaging

Memo
Identify and pack for shipping as per PPPD350-591-312
Location: FG072

521d

AUG 22 2017

DAS 6 27 2017 9:30

mil
18 July 2019

DQA: _____ Date: _____

QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order: 164051		AGAINST DEPARTMENT/PROCESS	
Part No. D350-591-312		Water Jet	
NCR No. 19-7326		Engineering Quality Other	
Date: 17-08-16		MRB (QSI042) Approval	
Step #: 4		PD 17-08-16	
Description Work Order Deviation		Disposition	
after rework done finish on step was not acceptable (had a rough finish) also point was too thickness was to much 9-10 mils thick.		Scrap destroy no replace	
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☒ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		Pressure/Forced Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	
Temperature/Cure Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Program ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	
Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☒ Misread ☐ Turning Sequence ☐		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
PD 17-08-16		PD 17-08-16	

Work Order ID 164051

Wednesday, July 12, 2017 1:43:24 PM

164051

Item ID:	D350-591-312	Accept	*N9000040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible					
Start Date:	7/20/2017	Start Qty:	10.00	Cust Item ID:		
Required Date:	8/1/2017	Req'd Qty:	10.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	1.00							
Quality Control									

W

AUG 24 2017

DAS
21
8-89

AUG 24 2017

DAS
21
8-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No.: _____ NCR No.: _____		DISPOSITION Suspected Unapproved Rework Scrap Use-as-is Skid-tube Machining Thermoforming Large Fab Cross tube Small Fab Finishing Composite Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier Engineering Quality Other		AGAINST DEPARTMENT/PROCESS		MRB (QSI042) Approval ☐	
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation			Disposition				
Root Cause			FAULT CATEGORY				
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong		
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions		
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance		
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect		
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing		
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved		
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing		
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish		
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread		
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence		
Past Expiry Date	Manufacturing Process						
Misidentified	Past Due						
OTHER : _____							
Completed By			Lead hand / Supervisor Approval Verification				
QC / QA Coordinator Approval							

Picklist Print

Wednesday, July 12, 2017 1:43:27 PM

Work Order ID: 164051

164051

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Hell-Access-Step™ RH - High Gear, Long Step, Acrazur Float Compatible

Start Date: 7/20/2017

Required Date: 8/1/2017

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP Rev:A04.03.22New issue KJ/RF
IPP Rev:B 07-06-09 Added D3572-1 JLM
IPP Rev:C 08-04-02 ECN1163 DD verified by:EC
IPP Rev:D 08-04-08 ECN1164 DD verified by:EC
fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN3-35A
AN3-35A
Bolt
Purchased No 250 Each 88.0000 2 20 12
**
DAS 27 9-89
AUG 17 2017

AN4-13A
AN4-13A
Bolt
Purchased No 250 Each 445.0000 2 80 48
**
DAS 27 9-89
AUG 17 2017

Location	Loc Qty	Loc Code
FG	20	
122808	20	
GA	28	
m134634	19	
m135470	9	
over003	200	
m137988	200	
ST344	197	
m137544	2	
m137886	195	



DQA: _____ Date: _____
QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS									
Part No. _____		Rework Scrap Use-as-is		Skid-tube Machining Thermoforming		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier		Engineering Quality Other			
NCR No. _____		Suspected Unapproved		Large Fab		Composite		Supplier		Other			
Date : _____		Step #:		QTY Effective :		MRB (QSI042) Approval							
Description Work Order Deviation				Disposition									
												Completed By	
												Lead hand / Supervisor Approval Verification	
												QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY									
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/ Surge	Positioned Wrong								
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions								
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance								
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect								
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing								
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved								
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing								
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish								
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread								
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence								
Past Expiry Date	Manufacturing Process												
Misidentified	Past Due												
OTHER :													

Picklist Print

Wednesday, July 12, 2017 1:43:27 PM

Work Order ID: 164051

164051

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Atrazur Float Compatible

Start Date: 7/20/2017

Required Date: 8/1/2017

Start Qty: 10.00

Required Qty: 10.00

ANS-36A

Purchased No

250 Each

116.0000

2

2012

ANS-36A
Bolt

AUG 17 2017
DAS 28 6 9-89

Location
over004

Loc Qty
100

Loc Code

DAS 27 9-89

ST336
m137820
m137963

50

12

D2230-3

Manufactured No

250 Each

184.0000

4

40

D2230-3
Mounting Lug

AUG 17 2017
DAS 28 6 9-89

Location
FG

Loc Qty
4

Loc Code

DAS 27 9-89

ST521
109344

4

180

D2618

Manufactured No

250 Each

78.0000

2

32

D2618
Bushing

Location
ST008A

Loc Qty
78

Loc Code

DAS 27 9-89

160408
162353
162901

1

27

50

12

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		AGAINST DEPARTMENT/PROCESS		MRB (QS1042) Approval	
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____			

Picklist Print

Wednesday, July 12, 2017 1:43:27 PM

Work Order ID: 164051

164051

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 7/20/2017

Required Date: 8/1/2017

Start Qty: 10.00

Required Qty: 10.00

D2856-400

Manufactured

No

250

f

221.1510

1.2

~~12~~ 12

DAS

AUG 17 2017

*D2856-400*720
Abrasion Strip 4" Wide (Per Foot)

Location
ST418

Loc Qty
221.1509953

Loc Code

146265
152590
160547

27.4088853
40.94211
152.8

5/16/2018

163681

cut (2) D2856-400-720 as per dwg
D3065-041

Manufactured

No

180

Each

4.0000

1

10

D3065-041
Step Leg Assembly

Location
WA002

Loc Qty
2

Loc Code

158830
162415

2

180

Each

36.0000

2

20

D3066-1
Spacer

Manufactured

No

Location
WA003

Loc Qty
36

Loc Code

159117
160204

4

110

Each

155.0000

1

10

D3067-1
End Plate

Manufactured

No

Location
WA003

Loc Qty
155

Loc Code

159903
160540
163742

10

40

105

163742

X10 S.L.

2017.08.01

DQA:

Date: _____

QA Closed:

Date: _____

WORK ORDER NON-CONFORMANCE / UPDATEWork Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		AGAINST DEPARTMENT/PROCESS		MRB (QS1042) Approval	
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation		Disposition					
Completed By		Lead hand / Supervisor Approval Verification					
QC / QA Coordinator Approval		QC / QA Coordinator Approval					

Root Cause		FAULT CATEGORY									
Environment	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐		
Design	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐		
Doc/Data	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐		
Equip/Tooling	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐		
Handling/Pre	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐		
Material	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐		
Internal Transport	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐		
Tribal Knowledge	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐		
LOA	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐		
Substation	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐		
Past Expiry Date	☐										
Misidentified	☐										
		OTHER : _____									

Picklist Print

Wednesday, July 12, 2017 1:43:27 PM

Work Order ID: 164051

164051

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Pilot Compatible

Start Date: 7/20/2017

Required Date: 8/1/2017

Start Qty: 10.00

Required Qty: 10.00

D3067-1

Manufactured No

180 Each

155.0000

1

10

D3067-1

**

End Plate

Location
WA003

Loc Qty
155
10
105
40

Loc Code

X10 SL 2017.07.21

D3219-1

Manufactured No

110 Each

78.0000

2

20

D3219-1

Plate

Location
WA003

Loc Qty
78
48
30

Loc Code

B163694

X20 S.L 2017.07.21

D3235-1

Manufactured No

250 Each

167.0000

2

20-1a

D3235-1

Mounting Lug

Location
ST522

Loc Qty
66
16
50
101

Loc Code

DAS
27
9-89

ST525A

158459
162413

158458
162757

110 Each

0.0000

1

10

D3272-1

Manufactured No

110 Each

0.0000

1

10

D3272-1

Step

B163796 -> 10x

2017-07-21

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		AGAINST DEPARTMENT/PROCESS		MRB (QS1042) Approval	
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			

Root Cause		FAULT CATEGORY									
Environment	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐		
Design	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐		
Doc/Data	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐		
Equip/Tooling	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐		
Handling/Pre	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐		
Material	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐		
Internal Transport	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐		
Tribal Knowledge	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐		
LOA	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐		
Substation	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐		
Past Expiry Date	☐										
Misidentified	☐										
		OTHER : _____									

Page 5

SECRET

164051

D350-591-312

Required Date: 8/1/2017

Required Qty: 10.00

10

**

30

89-23
AUG 11 2011

AUG

2

6

160

**

10.08.2017 7.5 091 X

Loc Code

100

1

11

1

1

1

1

Page 5

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only



Work Order: _____		AGAINST DEPARTMENT/PROCESS		Engineering ☐	
Part No. _____		Cross tube ☐ Water Jet ☐		Quality ☐	
NCR No. _____		Small Fab ☐ Prod. Eng. Coord. ☐		Other ☐	
Date: _____		Thermoforming ☐ Rec/Store/Packaging ☐			
Step #: _____		Large Fab ☐ Supplier ☐		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
		Completed By			
		Lead hand / Supervisor Approval Verification			
		QC / QA Coordinator Approval			

Root Cause		FAULT CATEGORY									
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong						
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions						
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance						
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect						
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing						
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved						
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing						
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish						
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread						
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence						
Past Expiry Date	Manufacturing Process										
Misidentified	Past Due	OTHER :									

Page 6

164051

D350-591-312

Required Date: 8/1/2017

Required Qty: 10.00

AUG 17 2017

20 12

218

AUG 17 2017

80

Das 28
9-89

47

Page 6

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		AGAINST DEPARTMENT/PROCESS		MRB (QSI042) Approval	
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation			Disposition				
Root Cause			FAULT CATEGORY				
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong		
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions		
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance		
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect		
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing		
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved		
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing		
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish		
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread		
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence		
Past Expiry Date	Manufacturing Process						
Misidentified	Past Due						
OTHER : _____							
Completed By			Lead hand / Supervisor Approval Verification				
QC / QA Coordinator Approval			QC / QA Coordinator Approval				

DQA:

Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: _____

Work Order update only

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		Date: _____ Step #: _____ QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation				Disposition					
Root Cause				FAULT CATEGORY					
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong				
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions				
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance				
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect				
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing				
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved				
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing				
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish				
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Mistread				
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence				
Past Expiry Date	Manufacturing Process								
Misidentified	Past Due								
OTHER : _____									
Completed By				Lead hand / Supervisor Approval Verification					
QC / QA Coordinator Approval									

Picklist Print

Wednesday, July 12, 2017 1:43:28 PM

Work Order ID: 164051

164051

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heil-Access-Step™ RH - High Gear, Long Step, Acraruz Float Compatible

Start Date: 7/20/2017

Required Date: 8/1/2017

Start Qty: 10.00

Required Qty: 10.00

NAS1149D0463J

Purchased

No

250

Each

3,333.000

16

160-96

Washer

NAS114.9D0463.J

Location

Loc Qty

Loc Code

GA

560

**

M135056

40

**

M137699

520

ST260a

2000

M137699

1400

M137988

600

ST263

773

M137371

773

250

Each

1,428.000

4

40-32

Washer

NAS114.9D0563.J

Purchased

No

250

Each

1,428.000

**

40-32

Location

Loc Qty

Loc Code

GA

36

m135774

36

ST260a

700

m137820

700

ST263

692

m137587

692



DESIGN <i>qp</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07.06.04 *H*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

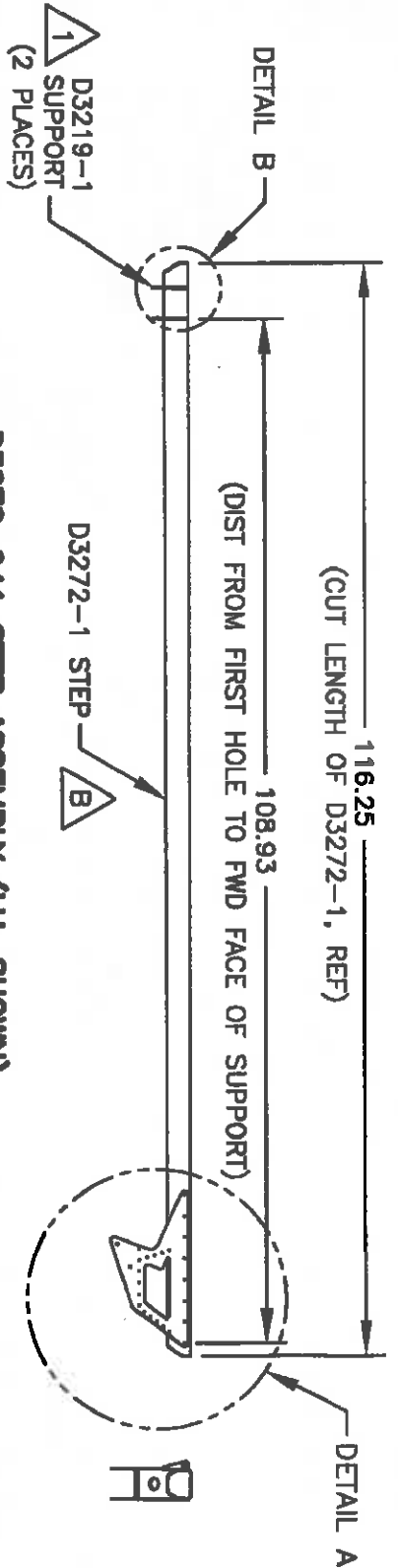
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 164051 M25
1907-12

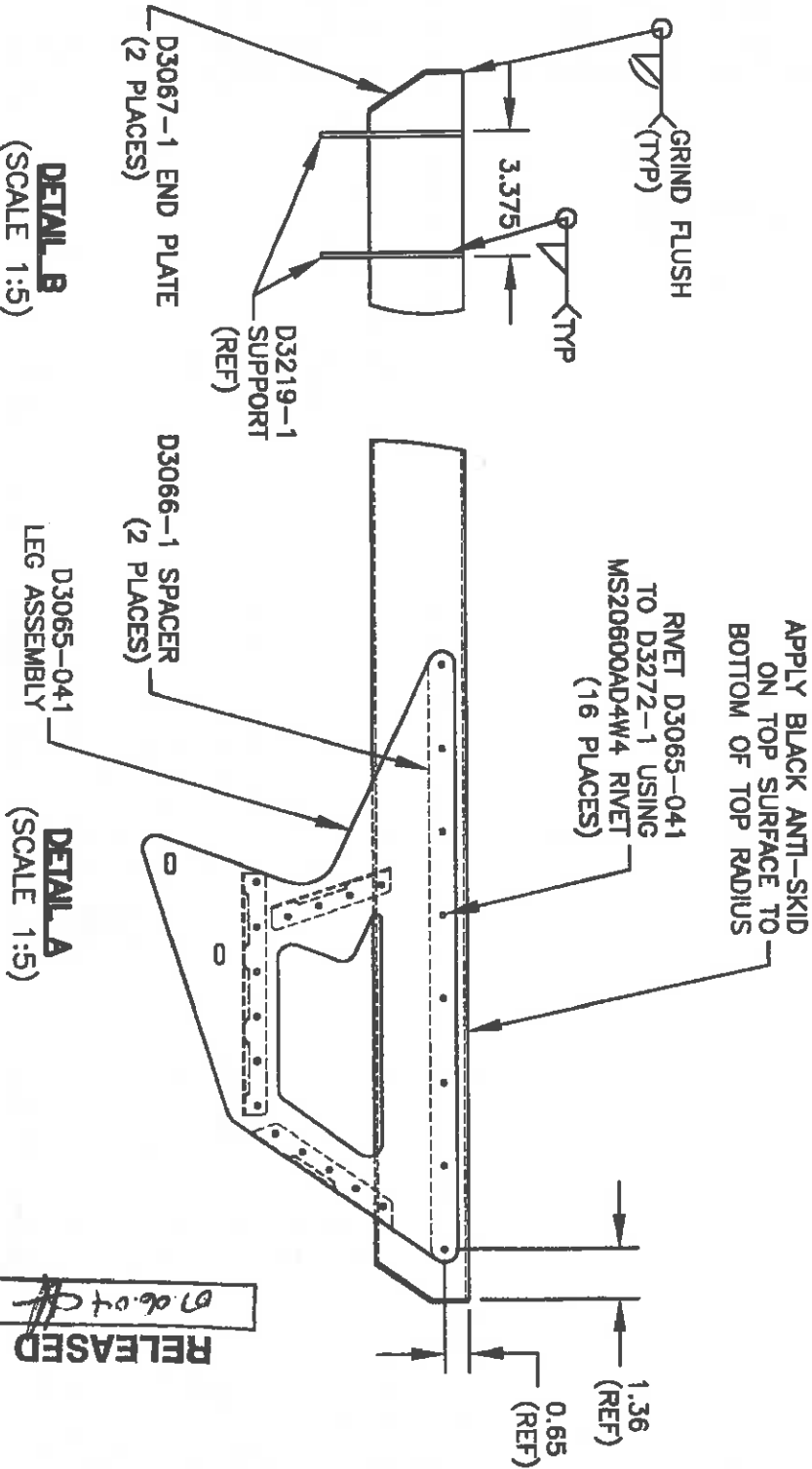
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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube Machining ☐ Thermoforming Large Fab ☐ Cross tube Small Fab Finishing Composite ☐ Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier ☐ Engineering Quality Other ☐							
Date: _____		Step #: _____		QTY Effective: _____							
Description Work Order Deviation				Disposition							
				Completed By							
				Lead hand / Supervisor Approval Verification							
				QC / QA Coordinator Approval							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		Root Cause No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : _____											



D3272-041 STEP ASSEMBLY (RH, SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



DETAIL B
(SCALE 1:5)

DETAIL A
(SCALE 1:5)

RELEASED

DESIGN BY	APPROVED	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	DATE	REV. B
07.05.18	07.05.18	SHEET 2 OF 3
07.05.18	07.05.18	SCALE
07.05.18	07.05.18	1:20

DQA:

Date: _____

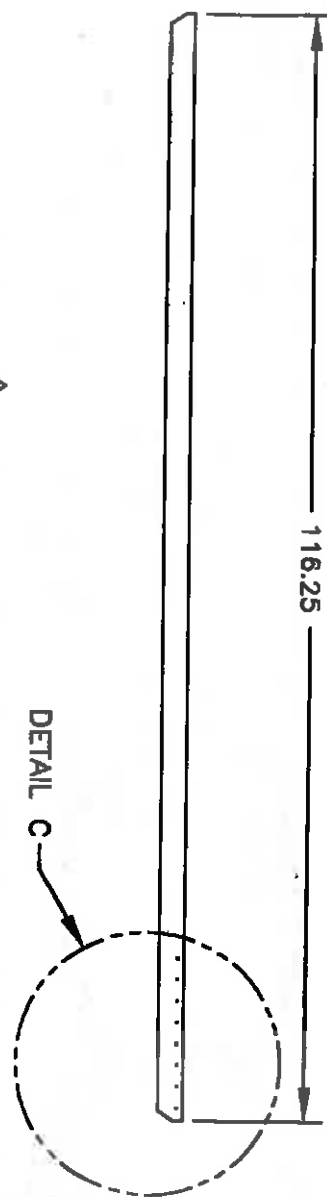
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

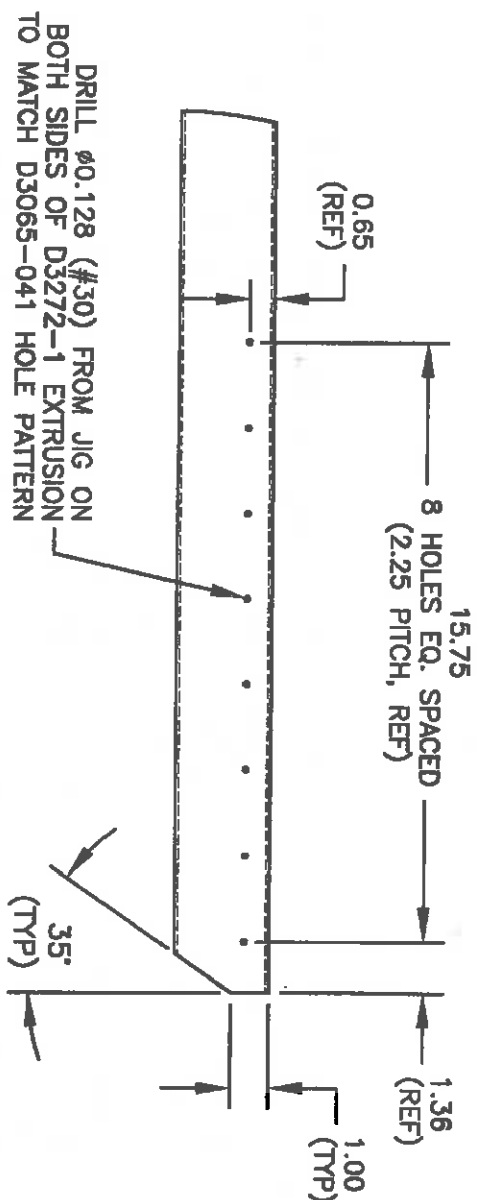
Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Engineering Quality Other	
Part No. _____		Rework Scrap Use-as-is Suspected Unapproved		Skid-tube Machining Thermoforming Large Fab		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier	
NCR No. _____									
Date: _____		Step #: _____		QTY Effective: _____				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition					
Root Cause				FAULT CATEGORY					
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong				
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions				
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance				
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect				
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing				
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved				
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing				
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish				
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread				
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence				
Past Expiry Date	Manufacturing Process								
Misidentified	Past Due								
OTHER: _____									
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					



D3272-1 STEP
(MAKE FROM D2622-120 STEP EXTRUSION)



DETAIL C
(SCALE 1:5)

DRILL Ø0.128 (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

RELEASED

07.06.04

DESIGN		DRAWN BY		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED		APPROVED		DRAWING NO. D3272
DATE		TIME		
07.05.18		SCALE		
		1:20		

DART



QA Closed: _____ Date: _____
Work Order update only ☐

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order: _____ Part No. _____ NCR No. _____ Date: _____		DISPOSITION Skid-tube ☐ Rework ☐ Machining ☐ Scrap ☐ Thermoforming ☐ Use-as-is ☐ Large Fab ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Cross tube ☐ Water Jet ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Finishing ☐ Rec/Store/Packaging ☐ Composite ☐ Supplier ☐		Engineering ☐ Quality ☐ Other ☐		MRB (QSI042) Approval ☐			
Step #: _____		QTY Effective : _____		Disposition		Completed By		Lead hand / Supervisor Approval Verification		QC / QA Coordinator Approval	
Description Work Order Deviation											

FAULT CATEGORY									
Root Cause		Pressure/Forced		Temperature/Cure		Power Loss/Surge		Positioned Wrong	
Environment	No Re-verification	Bending	Set-up	Folio/Program	Outside Dimensions				
Design	Operator	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance				
Doc/Data	Offset/Setup	Cracks	Broken/Damage/Defect	Weld	Part Incorrect				
Equip/Tooling	Supplier	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing				
Handling/Pre	Training	Cuffs	Contamination	Out of Sequence	Part Moved				
Material	Use for Testing	Crushing	Countersink	Off-set	Drawing				
Internal Transport	Poor Information	Heat Treat	Cut Too Short	Mislabeled	Finish				
Tribal Knowledge	Rushing	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread				
LOA	Product Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence				
Substation	Process Improvement								
Past Expiry Date	Manufacturing Process								
Misidentified	Past Due								
		OTHER : _____							

Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X						D350-591-213	Half-Access-Step™, Short Step – High Skid, LH
	X					D350-591-214	Half-Access-Step™, Short Step – High Skid, RH
		X				D350-591-215	Half-Access-Step™, Short Step – Low Skid, LH
			X			D350-591-216	Half-Access-Step™, Short Step – Low Skid, RH
				X		D350-591-311	Half-Access-Step™, Long Step – High Skid, LH
					X	D350-591-312	Half-Access-Step™, Long Step – High Skid, RH
1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
				1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
					1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
2	2	2	2	4	4	D2230-3	MOUNTING LUG
2	2	2	2	2	2	D2616	BUSHING
4	4	4	4			D2732-030	CUSHION
				2	2	D2856-400-720	ABRASION STRIP
2	2	2	2	2	2	D3235-1	MOUNTING LUG
				1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	AN3-35A	BOLT
				8	8	AN4-13A	BOLT
4	4	4	4			AN4-15A	BOLT
2	2	2	2	2	2	AN5-36A	BOLT
4	4	4	4	4	4	NAS1149D0363J	WASHER (AN980JD10)
12	12	12	12	16	16	NAS1149D0483J	WASHER (AN980JD416)
4	4	4	4	4	4	NAS1149D0563J	WASHER (AN980JD516)
2	2	2	2	2	2	MS21042L3	NUT
6	6	6	6	8	8	MS21042L4	NUT
2	2	2	2	2	2	MS21042L5	NUT
				1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 15 for installation of the DSI 9410-011 Kit.

